DOCUMENT RESUME

ED 310 785 IR 052 861

AUTHOR Klein, Susan S.
TITLE How Can the Federal Government Help Education Clearinghouses Provide More Cost-Effective Services?
PUB DATE 29 Mar 89
NOTE 25p.; Paper presented at the Annual Meeting of the American Educational Research Association (San Francisco, CA, March 29-April 4, 1989).
PUB TYPE Viewpoints (120) -- Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Clearinghouses; Cooperative Programs; *Cost Effectiveness; Financial Support; *Government Role; Information Dissemination; *Information Services; Public Agencies; Shared Resources and Services; Surveys; Users (Information)
IDENTIFIERS Private Sector

ABSTRACT

This report presents the results of a survey of 100 education-related information clearinghouses that was conducted to determine their current budget and funding levels, describes key characteristics of both federally and nonfederally supported clearinghouses, and recommends ways for the federal government to improve coordination among groups of them. Increased coordination is proposed to help clearinghouse sponsors provide more cost-effective services to education information users. Focusing on the federal government's role in education-related clearinghouses, the first section profiles the proliferation of such clearinghouses, which reported in 1988 an estimated aggregate budget of $44,570,000, with 1,522,639 requests being directly responded to. Also discussed is the potential for clearinghouses to systematically organize and distribute government information as a sensible national responsibility. The next section describes the nature and methodology of the study, and provides definitions of national education-related databases and information centers. The third section presents the findings about clearinghouses, including their type and size; content focus; users; accessibility; database items; user services; dissemination; technical assistance; and compatibility with ERIC. The final section presents assumptions and detailed recommendations for Congress, federal agencies, other organizations, and clearinghouse users for supporting cost-effective services. A list of clearinghouses is appended. (6 references) (SD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
X This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

ED310785

March 22, 1989

How Can The Federal Government Help Education Clearinghouses Provide More Cost-Effective Services?

Susan S. Klein[1], Office of Educational Research and Improvement
U.S. Department of Education, Washington, D.C.

For the Annual Meeting of the American Educational Research Association, Wednesday, March 29, 1989, San Francisco
Session 30.41 2:15-3:45 Powell A, 6th Floor, Hilton Hotel

This survey of 100 education-related information clearinghouses, indicates that 68 receive over one-half of their funds from the U.S. Government. Five of the others receive over $50,000 per year of federal funds in conjunction with their other major sources of support. Only 28 receive less than $5,000 from the federal government annually. This presentation will describe key characteristics of both federally and non-federally supported clearinghouses and recommend ways for the federal government to improve the coordination among groups of them. Increased coordination should help clearinghouse sponsors provide more cost-effective services to education information users.

I. The Federal Government's Role in Education-related Clearinghouses

There is a proliferation of national clearinghouses related to education.

Since the establishment of the federally supported Educational Resources Information Center (ERIC) Clearinghouses in 1966, many other education-related clearinghouses have surfaced. Some have remained and some have disappeared. Over one-half of the 100 clearinghouses in this survey focus almost entirely on education while others focus on education and other areas such as health, employment or economic development. Most of these federally and

---

[1] I would like to thank all of the survey participants who generously agreed to talk about their clearinghouse operations; Joyce Benton, Tom Litkowski, Nancy Krekeler and Keith Stubbs for assistance in using DBase for the survey; Cheryl Bailey and Alberta Jett for help in collecting information; Joyce Lowrey for secretarial support; Dorothy Myers for editorial suggestions; and Robert Stonehill for this fascinating assignment. The ideas expressed in this paper are mine and do not necessarily represent the views of my employer, OERI, in the U.S. Department of Education.

IR053861

non-federally supported clearinghouses have been created since 1980 and new ones are still being created to fill real or perceived needs of various organizations concerned with specific issues. The estimated annual aggregate budgets for these 100 clearinghouses during 1988 was $4,457,000. The total 1988 ERIC system budget, which includes two system support contracts in addition to the 16 clearinghouses but not salaries and expenses of ERIC staff within the Office of Educational Research and Improvement (OERI) in the U.S. Department of Education (ED), was $5.7 million.[2] There are also many more clearinghouses not included in this survey that may be included in future research and in a file and directory of such organizations that is to be created by a new ERIC system contractor called ACCESS ERIC.

In aggregate the 100 clearinghouses in this survey estimated that they responded directly to 1,522,639 requests from users during 1988. The ERIC system alone, which contains the largest education database in the world, accounts for about 5% of these requests for information. Like ERIC, 26 of the other 84 clearinghouses have computer-based databases available for searching outside the clearinghouses, thus making it difficult to estimate total use.

To my knowledge a survey of education-related clearinghouses has not been done since the National Institue of Education sponsored Databases and Clearinghouses: Information Resources for Education (Feaster, 1979; Gordon & Smink, 1982). Around the same time the Department of Health and Human Services sponsored a survey of human services information clearinghouses (Applied Management Sciences, Inc. & Cuadra Associates, Inc., 1980; Baker & King, 1981). As Ted Brandhorst (1989) describes in his related paper, there is a wealth of knowledge about computer-based databases and one of the information centers in our survey is now developing a directory of CD-ROMS for education and training.

This is the information age.

Not only is knowledge exploding in many fields, but electronic technology is changing how it can be organized and distributed. Educators and others concerned with education are learning how to make better use of the information delivery systems and they are asking these systems to respond to their questions and needs in increasingly sophisticated ways. For example, in addition to delivering a specific document in a timely manner, they want to

---

[2] The ERIC system support contracts and any similar funding for other clearinghouses were not included in the aggregate funding estimates for the 100 clearinghouses. Government staff were only included in the budget estimates if they operated the clearinghouses themselves. Thus, expenses of contracting monitors and officers were not included.

be able to obtain answers to questions such as, "What are the ten best programs to increase the participation and achievement of minorities and women in science?" Federal leadership can help each of these clearinghouses share their knowledge of how best to incorporate technological advances, effective dissemination strategies, and societal constraints into their activities. It can also be used to help with the transfer and appropriate use of technology and cost effective procedures to coordinate activities among these clearinghouses.

Clearinghouses can help the federal government with its dissemination responsibilities.

The U.S. Congress has given the executive departments and agencies many direct and indirect mandates for the sharing of information among and about their program areas. In some cases these "spread" or information diffusion dissemination activities have been assigned to clearinghouses.

The "spread" of information function of clearinghouses complements the knowledge generation (or research) functions and the training, technical assistance, implementation, (or knowledge use) functions of many federal education-related programs. While we know that in most cases the simple spread of information -- or making it available to those who request it -- will not necessarily restructure or even improve education, we also know that education is dependent upon the transfer of knowledge and information. In some cases the information will be used to help set the course for new actions. In others it will be used to confirm previously selected responses. And in others it will become the content of the instruction. Most of these education-related clearinghouses are designed to make the information available and accessible. However, relatively few clearinghouses have responsibilities for helping people use the information to change behavior. Such implementation assistance is often handled through training programs, and by technical assistance providers, dissemination linkers, and educational administrators. Many effective implementation strategies designed to improve education are discussed by Crandall (1989).

It is particularly appropriate for the federal government to help organize access to information to avoid inefficiency and inequities that would come from leaving this function entirely to the 50 states or other entities. Much of the federal education legislation partially acknowledges this national responsibility by stating that many of the programs should disseminate information to and among appropriate constituents. Many of these dissemination mandates acknowledge the importance of the federal government's role in disseminating all useful information, not just what the agencies produce or sponsor.

The federal government has made a good start in the systematic organization of education information in its support of ERIC and has developed additional sophisticated information organization and delivery systems for medicine and agriculture through their national library systems. Many agree that the systematic organization and distribution of information on documents and other educational resources is a sensible national responsibility. (Reference Federal Role papers.)

II. Nature of this Survey

Definitions of national education-related clearinghouses or information centers.

Although there is no clear consensus definition of an education-related clearinghouse or information center, I have used these two names interchangeably to mean:

- A place where an organized U.S. or international database or set of related databases is maintained on a specific content, (e.g., adult literacy), process, (e.g. satellite communication), or resource type (e.g., computer software) and continuously updated.

- A place which maintains a database with a fairly comprehensive (state of the knowledge) set of acceptable resources in its designated scope area. This database must not be limited to documents or materials produced by any specific set of sponsoring organizations. In some cases this means that the database pulls information from other databases to create its own tertiary database in the area, e.g. Native American Research Information Service, NARIS. Although the OERI, Education Information Branch primarily distributes OERI and other selected publications from the Department of Education, it was included in the survey because it uses more comprehensive databases such as ERIC and the Department's Education Research Library to respond to requests. The Environmental Protection Agency, EPA, Public Information Center and its headquarters library were also treated as a clearinghouse, but neither would have met the clearinghouse criteria alone.

- A place where the database and services are likely to be useful to people who want information about education or training at any level of education, but the full database may not be primarily intended for educators. Thus, some health, social science, science and multi-disciplinary databases such as the National AIDS Information Clearinghouse, the National Criminal Justice Reference Service and the National Council for Research on Women Information Services have been included.

- A place where information from the database(s) is available to any requester nationally and internationally, possibly with minimal database search or document cost-recovery charges. Thus, a clearinghouse user does not have to be a member of any specific organization or to live in a particular state to acquire information from the clearinghouse. However, such membership may entitle a person to additional or less expensive services. Some clearinghouses that are primarily funded to serve an individual state or region or set of employees are included if they will respond to requests from across the nation and if their database and services aren't replicated by others with a similar mandate. The Regional Drug Information Centers and the nine NASA Teacher Resource Centers did not meet these criteria and were not included in this survey.

- A place where staff spend some time and effort actively sharing information of potential interest to many of their constituents without waiting for individual requests. This is done through newsletters by 55 out of 84 non-ERIC clearinghouses and through the production of other types of knowledge interpretation or information analysis products such as fact sheets, bibliographies, research syntheses, and directories by even more. Most of these clearinghouses have mailing lists and, excluding ERIC, these mailings go to over 914,000 constituents.

- A place which usually calls itself a clearinghouse, resource center, information center or information service. Thus, organizations such as the American Psychological Association's PsychINFO User Services which manages the development and marketing of the American Psychological Association's national databases was excluded, because it does not want to be viewed as a clearinghouse or help people with specific requests about psychology at its offices. However, the organizations which manage Sociological Abstracts, AGELINE, and Family Resources Databank were included because they were willing to provide some direct user services. Conversely, not all organizations that call themselves clearinghouses qualify, such as the Clearinghouse on Women's Issues which has monthly meetings, but does not have a database or respond to requests for information from across the nation.

Excluded from this survey of education-related clearinghouses are:

- Associations which routinely share some information and will provide it to their members and others who request it, but who do not clearly indicate that they operate a comprehensive public information service, clearinghouse or

databank. We hope to include more association supported activities of this nature in an update of this survey if the organizations meet our clearinghouse definition and are of sufficient size in terms of the number of items in their databases and user requests.

- Specialized information services which deal mostly with non-education information such as the Environmental Protection Agency's Small Flows Clearinghouse or which provide statistics on criminal justice activities.

- Large national libraries or distribution services such as: the Library of Congress, and the National Library of Medicine, but I did include the education-related information centers from the National Agricultural Library, the Education Information Branch which helps facilitate access to information in the U.S. Department of Education Research Library, and the U.S. AID Library which has many active dissemination components.

- Organizations such as the National Technical Information Service, NTIS; the National Audio-Visual Center, and the Women's Educational Equity Act Publishing Center and the contractor which responds to requests for information on government-sponsored student financial aid. These organizations were excluded because their databases were limited to government-sponsored documents or information.

Survey Process

Identification of the clearinghouses in this survey.
Appendix A contains a list of the 100 clearinghouses in this survey. They were initially identified by staff from the ERIC Clearinghouses, the U.S. Department of Education's, Office of Program Planning, Budgeting and Evaluation and Office of Educational Research and Improvement, and by asking each of those interviewed about other national clearinghouses and information centers in their general areas of concern. Only clearinghouses that met the previously described definitional criteria received indepth interviews and were included in the list of 100.

Information collection.
From January through March 17, 1989, I telephoned the non-ERIC clearinghouses and conducted a structured interview with each director, or a key staff member. Sometimes we had to communicate several times to obtain all the requested information. Occasionally, the federal project monitor was contacted for additional information. The interviews took from 20 minutes to one hour each. When possible, I incorporated information from written materials describing the clearinghouse on the survey form prior to the telephone interview. All completed survey forms

will be mailed to the main interviewee for verification and will be corrected as appropriate.

Analysis of survey information.
The survey forms use DBase III-Plus with extensive use of memo fields. (Information from most memo fields was lost for the first 40 entries and had to be reconstructed.) DBase analyses were supplemented by manual sorting and interpretations. Much of the information is based on estimates since there is little comparability among clearinghouses on how they describe their functions and budgets.

Use of survey reports from individual clearinghouses.
In addition to sharing the verified survey records upon request, they will be turned over to information offices in the Department of Education and to a new contractor, ACCESS ERIC. Some of this contractor's responsibilities include establishing and maintaining a user friendly computer-based file and print directory of education-related clearinghouses and operating a referral service.

III. Findings

Type and Size of Clearinghouses

There are many varieties of clearinghouses and information centers ranging from those that reside within a federal government agency to those that are operated by associations without any federal support. There are also very large clearinghouses such as the National AIDS Information Clearinghouse with a budget exceeding $5 million per year and responding to over 290,000 requests annually to those that are quite small and specialized such as the $18,000 a year Clearinghouse of the Public Service Satellite Consortium with 700 requests per year. Some are independent contracts and some are so integrated with other development or technical assistance activities that it was difficult to estimate an annual budget for clearinghouse activities. In some cases separate projects are entered as one clearinghouse if the projects operate jointly (such as the National Maternal and Child Health Clearinghouse and the National Center for Education in Maternal and Child Health). In other cases, at the advice of the respective directors, I have described clearinghouses under the same organizational structure, such as the three information centers in the National Agricultural Library and the three clearinghouse-type projects at the Council for Exceptional Children as separate entries.

To help make policy recommendations, the clearinghouses in this survey are be divided into categories based on size related to their current annual budgets.

Large clearinghouses with budgets over $600,000 per year.
Of the 16 clearinghouses in this budget category, 12 receive most of their support from the federal government. This support ranges from $622,000 at the National Information Center for Handicapped Children and Youth (NICHCY) to $5 million at the National AIDS Information Clearinghouse (NAIC). Much of the budgets of the non-federally supported clearinghouses -- Sociological Abstracts and the Educational Products Information Exchange (EPIE) -- are used to support the development of their databases. For example, EPIE's new IIIR database requires extensive analyses and coding of items such as tests and textbooks.

The National AIDS Information Clearinghouse responded to over 290,000 requests in 1988 and the others responded to anywhere from 1,200 to 250,000 requests per year. The total items in the databases ranged from 5,000 for the Maternal and Child Health Clearinghouse/Center to over 100,000 for just the bibliographic portion of the National Criminal Justice Reference Service database.

Medium-size clearinghouses with budgets from $100,000 to $599,000 per year.
The three largest funded medium-size clearinghouses receive both federal and non-federal funds. They include the Information Center for Special Education Media and Materials, the Job Accommodations Network, and KIDSNet, all with annual budgets over $460,000 in 1988. The Information Center for Special Education Media and Materials with 5,600 items in its database receives 30,000 requests per year and KIDSNet with 30,000 items; receives 5,000 requests annually.

Total annual requests for information from the rest of the federally and non-federally supported medium-size clearinghouses range from 500 for some new clearinghouses to 300,000 for the non-federally sponsored Association for Children and Adults with Learning Disabilities. Thirty-two of these medium budgeted clearinghouses receive over 150 to 5000 requests, 15 receive over 5,000 to 10,000 requests, three receive over 10,000 to 20,000 requests, three receive over 20,000 to 30,000 requests. The wide disparity in requests may be attributed to the extent of service given to each. For example, many users of Children's Defense Fund's Adolescent Pregnancy Prevention Clearinghouse receive value added information from multiple files and some even receive follow-up calls to help them with their problems.

The databanks in these clearinghouses range from 300 items for a highly specialized higher education assessment resource center to 200,000 for the Family Resource and Referral Center database. Most of these medium budget size clearinghouses have databases with 10,000 or fewer items. The 16 ERIC Clearinghouses fit into

this medium budget category, but they will all claim the same 666,000 item database since they all contribute to and use it in a coordinated way. Over 80% of these medium-size clearinghouses are federally funded.

Small clearinghouses.
The 26 clearinghouses with total annual budgets under $100,000 will be called small clearinghouses. Eleven receive half or more of their support from federal funds. Annual requests for information range from 300 at the English Plus Clearinghouse to 63,000 for the similarly funded American Society for Training and Development Resource Center.[3] The total items in these databases range from 100 to 75,000.

Content Focus

Despite the fact that this sampling of 100 clearinghouses does not necessarily represent the total array of clearinghouses, it is interesting to note how they cluster in certain areas.

Nineteen clearinghouses focus specifically on special education or rehabilitation information. Together these 19 (including the ERIC Clearinghouse on Handicapped and Gifted Children) receive $6,030,161 annually and 460,375 requests for information from their databanks containing over 270,563 items. Two of these clearinghouses are in the select category of large clearinghouses and all but one of the rest fit into the medium size category. All but three receive most of their funds from the U.S. Department of Education and one of these is supported by the U.S. Department of Health and Human Services, Office of Maternal and Child Health.

Thirty-two clearinghouses attend in some substantial ways to content areas related to family issues such as health, pregnancy, young children, women, sexuality, and population information. All but ten are federally supported -- eight by the Department of Health and Human Services (HHS), eight by the Department of Education including three ERIC clearinghouse and joint funding with HHS of the National Clearinghouse for Alcohol and Drug Information, four by the U.S. Agency for International Development, three by the Department of Agriculture and one each by the Department of Labor and the Department of Defense.

Including the ERIC Clearinghouse on Social Science, Social Studies, eight clearinghouses have a major focus on international information including education and training. Most of these

[3] Actually, the very modestly funded Chapter 1 Technical Assistance Center Clearinghouse which is in transition from a previous contract was lowest with 75 requests.

clearinghouses are funded by U.S. AID and three also are listed in the family issues category.

Fourteen deal with issues of people in the U.S. with limited English proficiency or literacy and with special problems associated with many in these groups such as immigration and school dropouts. Three of the clearinghouses are specifically concerned with adult literacy, three with bilingual education issues, and five ERIC Clearinghouses have major interests in these language and literacy areas.

Seven primarily are designed to provide information related to employment and vocational education including two that provide information on job accommodations equipment and services for the disabled. Many others such as those dealing with criminal justice and corrections, also provide some employment related information. Some such as the National Clearinghouse for Professions in Special Education and the Southern Regional Educational Board Career Ladder Clearinghouse, are devoted to employment in education professions.

Some are concerned with sharing information about technology such as computer software, satellite communication, television and radio programs.

Four others focus on evaluation, testing and assessment. They include the ERIC Clearinghouse on Tests, Measurement and Evaluation, the Test Center at Northwest Regional Educational Laboratory and, two higher education assessment centers supported by the Fund for Improving Postsecondary Education.

In addition to the ERIC Rural Education and Small Schools Clearinghouse, two others focus on Native American Indians. Aside from ERIC coverage there seems to be little clearinghouse activity related to education in the fine arts, gifted students, mathematics education or some social science areas such as politics.

Clearinghouses Users

One of the striking findings about the these clearinghouses is that most of them have multiple purposes and a wide variety of types of users. The most frequently mentioned constituency was practitioner or the professional in a given field. For education this meant teachers, administrators and trainers. For other areas it meant health or corrections professionals, program staff, or counselors. Often these users were also seen as policymakers or planners. Another category mentioned by over seventy percent of the respondents was researcher in the content area of the clearinghouse. Sometimes the people doing research were also students. Members of the community including parents

and other non-professionals in the field were also mentioned by over sixty percent of the clearinghouses. Over eighty percent said that they spent some time supplying information to libraries. Over forty percent said that they frequently responded to questions from the public media such as press or television producers but some said they would welcome more inquiries from these sources. Several volunteered that their clearinghouse was designed to provide information to the intermediaries or professionals in the area, not the ultimate beneficiaries such as the pregnant teens.

Over eighty percent of the clearinghouses said that they frequently referred people to other sources for information, but not all of them were familiar with the other clearinghouses in their general areas. Seventy-five percent specialized in providing information on programs in their domain and many had separate program, project, or "work in progress" files. Just slightly fewer provided information on curriculum or training materials and/or "how to do it" methods. Ten or fewer provided much systematic information on sources of funding in their areas or on statistics. However, several said that funding information was one of the files they want to add.

Accessibility

Almost all said they had some sort of a facility or resource room open to visitors, often by appointment, but with the exception of a couple of the library-based clearinghouses, this was not how they served most of their users. Eighty two had much of their database on some sort of a computer system and over half of these were searchable via computers outside as well as inside the clearinghouse. Most of the others wanted to put their information on computer. Only one, the Immigration Control and Reform Act Clearinghouse, said that efforts to "computerize" their database were abandoned. Often not all of the collection or database was put on the computer. Frequently clearinghouses had some paper catalogs for materials not on a computer database or they organized the holdings so that staff could easily find the items without a catalog guide. In addition to the ERIC Clearinghouses, twenty-six of the clearinghouses had databases that were searchable remotely often though on-line vendors or, in five cases, by CD-ROM as well.[4]

---

[4] The three Information Centers that use AGRICOLA, Sociological Abstracts, and the Population Information Program's POPLINE are now available on CD-ROM and the National Criminal Justice Referral Service and the Family Resource Database are actively planning for CD-ROM delivery.

The Resources in Computer Education (RICE) clearinghouse is making floppy disks of their database available. It was surprising to learn, however, that three clearinghouses (EPIE, Environmental Quality Instructional Resource Center, and the National Alliance of Business) said that they used to make their database available on-line, but had to stop, because the costs to sustain them were too high.

ERIC is the only database where copies of most of the actual documents are available on microfiche at over 700 locations throughout the U.S. and the world. Some of the documents from U.S. AID are available in microfiche as are the Department of Justice documents in the National Criminal Justice Referral Service and its subsidiary, the Juvenile Justice Clearinghouse. The Juvenile Justice Clearinghouse also has mini-flims on selected literature. Although some documents from the National Rehabilitation Information Center (NARIC) are on microfiche, the National Clearinghouse of Rehabilitation Training Materials, the Environmental Quality Instructional Resources Center, and the Food and Nutrition Information Center of National Agricultural Library (NAL), have halted microfiche reproduction because most requesters prefer to receive paper copies. ERIC and many others also provide information on how to obtain copies of journal articles and dissertations via University Microfilms if they aren't available in local libraries. Four other clearinghouses (American Society for Training and Development, the Family Resource and Referral Service, Sociological Abstracts and the U.S. AID Library have formal document delivery arrangements to provide paper reproduction of fugitive type documents for a small fee. Others such as the National Maternal and Child Health Center are trying to work out document delivery arrangements with the National Technical Information Service, NTIS. Many clearinghouses will copy some documents (where legal) on a cost-recovery basis. However, the most common way that clearinghouses help people obtain the actual documents or program, curriculum, or products is to supply "availability" information along with other descriptive information in the computer database. A limited number of clearinghouses loan documents or audio-visual material. None of the clearinghouses actually have systems to deliver the entire documents via electronic technology (except perhaps by "faxing" a paper copy) or sending selected information on a Floppy Disk. However, some, like ERIC, are exploring ways that at least some of the full documents may be made available using computer transmission, disks, or CD-ROM. The National Criminal Justice Referral Service is making its entire database available on CD-ROM by summer 1989 and also plans to put a subset of full documents on CD-ROM. In all cases the clearinghouses try to maintain comprehensive and updated coverage of their domain.

Types of Items in the Databases

Forty eight of the 84 non-ERIC clearinghouses contain about the same wide variety of documents as does ERIC (guides, curriculum materials, articles, books, reference materials, collected works, reports, speeches, conference papers, tests, etc.). Additionally, over one-fourth of these 84 clearinghouses have substantial collections of AV material such as films and video and audio tapes. One-fifth have computer software. One-fourth have a systematic section of their database devoted to experts in their field. Over half have a similar listing of organizations, and 45% have current project/program or work in progress components. Only a few have major statistical databases or legislative databases, although like ERIC, most contain legislative and statistical information in various reports.

Some clearinghouses have a more limited range of document types in their database than ERIC does. In some cases they built their database to complement ERIC and thus did not include documents that would be appropriate for ERIC. Many of these more restricted databases, such as The National Dropout Prevention Center, focus on providing current or "model" program information.

As may be seen by the variety of items in these databases and in the inter-relationships of many, it was often difficult to estimate total number of items. (Information about one expert would count as one item, just as one research report would). The clearinghouses that did not have all of their resources on a computer list often found it difficult to estimate the number of items in their database unless they had a paper catalog of their holdings. Also, many databases gathered items from other databases to supply their users with a comprehensive body of information. In counting the aggregate items in the databases for some of the large clearinghouses, we limited the counts to the subsection of the database for which the clearinghouse was responsible, and we did not count the ERIC database 16 times for each of the ERIC Clearinghouses.

User Services

Relatively few clearinghouses have substantial restrictions on who they will serve, but many will serve certain groups more extensively, actively, and at no or lower costs because generally they are funded to give priority to these users or because these users are members of or supporters of the clearinghouse organization(s). Thirty-four have a toll-free telephone. Almost all that have a computer databank will search it and often any other information on their premises in response to requests. However, they will generally limit search of other databanks to help staff of their own organization rather than their general

clients. In addition to supplying information on how to obtain documents described in their databases, clearinghouses have their own documents which they use to respond to questions and to actively disseminate analyses of information in their fields. Eighty-five have some free materials which they distribute in response to common requests and 71 sell materials which they or their sponsors produce. Some of the clearinghouses are also supported to give their more expensive materials to selected requesters, as do many of the ERIC Clearinghouses. Some will make camera-ready copy or other easy to duplicate negatives available to organizations wanting to make multiple copies of documents.

Eighty-two clearinghouses had some manual or computer-assisted procedure to track many of their user's requests for information. Thus, 1.5 million requests -- the aggregate number of user requests during 1988 based on visits, telephone calls, E-mail, and letters requesting information or publications -- is fairly accurate. However, as noted earlier, it doesn't represent total use of all the databases, particularly those like ERIC that are accessible to users outside the clearinghouse premises.

While most of these clearinghouses see themselves as straight-forward information dispensers, some see themselves as supplying more "value-added" technical assistance to help their users solve their problems. They seem to provide this extra help in two ways: (1) They pull together information from multiple sources such as program information, experts in the users region, how to do it advice, etc. Sometimes they even follow-up to see what additional ways they can help the requester. (2) They provide formal or informal evaluations of items in the database to guide the requester to information that is likely to be most active in providing these more extensive analyses or "hands-on" help. Clearinghouses that appear to be most active in providing these more extensive analyses or "hands-on" help include: EPIE, the Adolescent Pregnancy Prevention Clearinghouse at the Children's Defense Fund, and the Community Information Exchange.

Evaluation

After deciding that something was worthwhile and appropriate for their database, only 16 clearinghouses indicated that they would publically describe ratings of any of the items on effectiveness or other dimensions of quality in the database. In some instances these ratings were only given in some of the special staff-developed publications such as the "pathfinder" bibliographies from the National Agricultural Library Information Centers or the Consumers Guides from the Northwest Regional Educational Laboratory's Test Center and Resources in Computer Education, RICE. Sometimes, the clearinghouse admitted that staff would relay this evaluative information privately, but it

was not put in writing. For example, a blind staff member had tested many of the devices at one of the rehabilitation training clearinghouses and knew which producer claims were valid or invalid, but his assessments were not documented for others to share when he was not at work.

Almost all of the clearinghouses said they at least did informal assessments to determine what their constituents needed or wanted or how they could improve their operations, but only eight used any formal systematic evaluations.

In addition to reporting user statistics to funding sponsors, many clearinghouses collected information with enough level of detail to provide guidance on user needs. The Population Information Program has developed a creative way to collect feedback on many of POPLINE's CD-ROM users by inserting a special disk to record user search activity in the computer. Periodically, this disk would be mailed back to the clearinghouse for analysis.

Dissemination

One of the ways that clearinghouses or information centers differ from specialized libraries or organizations that just focus on producing a commercial database is that they also actively provide their constituents with interpretive information on topics of interest. This is most commonly done through newsletters by 71 clearinghouses and by other summary or interpretive documents such as fact sheets or knowledge syntheses by 91 clearinghouses. If active computer networks or bulletin boards exist in their area, as they do for special education, many of the clearinghouses use them in addition to printed documents. If the clearinghouse doesn't produce its own newsletter, it will often contribute a column for the newsletter of its supporting project or association. In addition to fact sheets, bibliographies and directories are common types of clearinghouse-produced products.

Technical Assistance

As mentioned in the discussion of user services, most clearinghouses limit their scope or content area assistance to providing information and referrals. Few actually do any formal content-focused technical assistance such as training or "hands on" help with implementation or any follow-up to determine future information needs of users. However, almost all the clearinghouses with more sophisticated "remote access" computerized databases have procedures or guides to help their users. Staff of almost all clearinghouses are willing to provide assistance and advice to others who want to establish or improve their own clearinghouse operations. However, staff of the

larger, well established clearinghouses are most likely to be involved in this type of technical assistance.

Compatibility with ERIC

Only 23 of the 84 non-ERIC Clearinghouses said that they provided documents to ERIC. Most of these documents were produced by their organization, rather than the other documents included in their databases. However, many clearinghouses said that they would be delighted to help ERIC identify good education related documents and liked the idea that the fugitive type documents in their own database could also be made available through ERIC microfiche and paper blow-back copies.

Most non-ERIC Clearinghouse staff were somewhat familiar with ERIC and many searched ERIC at least sometimes and knew where they could use a nearby microfiche collection. However, few knew the extent to which their own abstracts, annotations, and indexing were similar to ERIC's. And even fewer had close working relationships with ERIC or been invited to become Partners of specific ERIC Clearinghouses. Most had never heard of the ERIC Partner concept.

IV. Assumptions and Recommendations

There is a great deal that the federal government and other information providers can do to support cost-effective services to improve education and access to information. Since there is a continuing information and knowledge explosion in our society, the federal government and other national organizations have been addressing this challenge by establishing clearinghouses or information centers in various areas of national interest. This preliminary survey of 100 education-related clearinghouses has documented many efforts to deliver cost-effective services and some coordination among small groups of clearinghouses. It has also revealed a great deal of diversity, lack of coordination, and lack of federal leadership in making all of the clearinghouse operations as effective and efficient as possible. The three major organizations that have the power and responsibility to improve nationally-focused education-related clearinghouses are: the U.S. Congress, the federal executive agencies with education information dissemination responsibilities, and the other organizations and staff involved in sponsoring or operating national clearinghouses. Recommendations will be made for each of these groups as well as for the clearinghouse users.

Assumptions

Although all of the clearinghouse contacts who provided information for this brief survey have been most cooperative, some have expressed concern about the motives and assumptions for the survey. These are:

- Nationally focused education-related clearinghouses are valuable mechanisms to share information in these times of knowledge explosion and decentralization of many services.

- The federal government has an important leadership role in this area of information dissemination. This role should be based on: its general and specific education program objectives as well as appropriate use of knowledge about dissemination and advances in technology.

- The federal government has already established some excellent building blocks and models; namely the ERIC system in education, and the systems of National Libraries of Medicine and Agriculture.

- It is fine for narrowly focused national clearinghouses to exist along side more generally focused clearinghouses, as long as many of their activities are coordinated to decrease expensive duplication of effort and reduce confusion among potential users. For example, it may not be cost-effective to produce multiple similar abstracts of the same documents. Likewise, information about the wide array of national clearinghouses should be available to potential users.

- More needs to be learned about effective national clearinghouse procedures. For example, how do national clearinghouses relate to other dissemination linkers such as regional, state, or local dissemination organizations? When and how should clearinghouses provide free information and services?

Recommendations for Congress

Congress should continue to include dissemination, networking and technical assistance responsibilities in all types of national education-related legislation, but it should require the agencies to coordinate these functions in meaningful and appropriate ways.

1. Build on the ERIC system.

This may mean specifying that the education-related clearinghouses in the Departments of Education and Labor and agencies such as the National Science Foundation join the ERIC system, perhaps as Adjunct ERIC Clearinghouses. It could also mean legislating and appropriating funds for specific

coordination activities to help connect current clearinghouses with ERIC realizing that this may expand the recent conceptions of this 23 year old system. Even without legislation, funds could be provided to help the ERIC system provide additional services to the current non-ERIC clearinghouses and to provide modest financial and other incentives directly to those clearinghouses wishing to take on Adjunct ERIC Clearinghouse responsibilities. Many of these activities would involve making databases and services more compatible among clearinghouses. with ERIC.

2. Legislate ongoing coordination of clearinghouse activities within and among agencies.

This may mean asking for some overall coordination of clearinghouse missions to capitalize on existing strengths and to avoid excessive duplication within government-sponsored activities and among government and private clearinghouses. For example, it is not clear how all of the 18 clearinghouses identified in the handicapped and rehabilitation services areas have unique complementary roles, and what happens to databases and services created by previously federally supported clearinghouses if the host organization isn't able to maintain them at an adequate operating level. Such a coordination charge could be given to a lead program such as ERIC, be developed as part of legislation for a National Library of Education, be recommended by a "Blue Ribbon" commission, or incorporated in the operating procedures of the appropriate agencies.

Recommendations for the Federal Agencies

Even under current legislation the federal agencies can assume a greater leadership role in improving their use of national education-related information clearinghouses. Specific suggestions, most of which require additional resources, include:

1. The U.S. Department of Education, the National Science Foundation Education Directorate and the offices within the Department of Labor related to education and training should conduct surveys to learn how each of their programs provide information to their constituents. Based on this knowledge they could describe how to coordinate these services with current and future ERIC and related education information dissemination services such as the various ED offices' current project information databases. Information Services in OERI could be assigned coordination responsibilities for this survey and follow-up work.

2. Incorporate requirements for coordination with ERIC and other relevant clearinghouses and information and technical assistance providers in forthcoming grants announcements and requests for

proposals. This should be done for many types of procurements, but most importantly for clearinghouses and information or resource centers.

3. Examine ways that the federal government can best support clearinghouses over time and facilitate their cooperation with each other. Staff of some clearinghouses have indicated that they have more disincentives than incentives to cooperate because they often compete with each other for the same clearinghouse contracts. It is also often quite disruptive to change contractors and to physically relocate large databases.

4. Follow-up this survey by having OERI organize annual conferences of education-related clearinghouses and their agency sponsors to facilitate collaboration and coordination among them and to help them learn from each other. (Some of the survey respondents suggested that the government should do this and said they would be anxious to participate.)

5. Give high priority to having the new ACCESS ERIC contractor produce a computer-based directory of education-related clearinghouses based in part on this survey.

Recommendations for Other Organizations and Staff Involved in Supporting and Operating National Clearinghouses

Recommendations for non-federal sponsors of national clearinghouses.

Although it appears from this initial survey, that the bulk of the national clearinghouses in terms of money and activities are federally supported, private organizations also support and create their own clearinghouses and, of course, operate many of the federal clearinghouses. In only a few cases did it appear that the non-federally supported clearinghouse played a role that might be different than a federally-supported clearinghouse. For example, the English Plus Clearinghouse is an advocate for its position although it contains information on both sides of the issue and will provide information to all who ask. Another distinction is that the federally supported clearinghouses usually provide more free materials and services than those receiving no or limited federal support. To use their resources more expeditiously, these non-federal clearinghouses should:

1. Tie in to federally-sponsored clearinghouses and arrange to exchange and develop complementary resources rather than to duplicate efforts. The National Dropout Prevention Center does this nicely by concentrating on building a program database, and referring users to ERIC for bibliographic and curriculum information. They may also consider becoming ERIC Adjunct Clearinghouses. More should also be done to encourage joint private and public support of clearinghouses.

2. Start your own more specialized or limited-audience clearinghouse only if it is essential to fill your own needs or fill a gap that is not adequately covered by government services. It most cases your own clearinghouse will be most cost-effective if you purchase services and databanks from existing clearinghouses and ensure that your operations will be compatible with major clearinghouse systems. Such compatibility may be very important if you want to use ERIC microfiche to help with document delivery or phase-out support, yet not completely abandon your collection.

3. Learn cost-effective procedures from federally-supported clearinghouses and teach them what you have learned. This exchange of advice about applications of new technology and implications derived from results of research and evaluations on clearinghouses should help you and your constituents.

Recommendations for All Clearinghouse Staff.

4. Learn about other clearinghouses in related areas so that you can refer users to them and save your clearinghouse duplicative work by using some of their resources. For example, the ERIC Clearinghouse on Handicapped and Gifted Children has started collaborative meetings with many of the other 18 clearinghouses in this content area. These collaborative meetings have already contributed to increased distribution of each others' information analysis products.

5. Encourage the federal government to help with the coordination among clearinghouses by: contributing to future research in this area, responding to requests for information for the development of a user friendly computer-based file and directory of national clearinghouses, and by participating in national conferences on education-related clearinghouses.

Recommendations for National Clearinghouse Users

There are two large categories of national clearinghouse users: (1) the linkers, disseminators (including national media), and technical assistance providers and (2) the ultimate users or beneficiaries. Both groups can increase their influence over federal decisions about national education-related clearinghouses by becoming more assertive about their needs and by encouraging research on how they can be served most cost-effectively.

1. The general or multi-focused information linkers or intermediaries in regional and local laboratories, centers, libraries, state or local government education agencies, associations, etc., should insist on obtaining more information about national information clearinghouses so they can make appropriate referrals for their own users who need more

specialized information than they can provide. These linkers should also be high priority recipients of free materials from clearinghouses of their choice and be on their advisory boards and mailing lists.

2. In most cases, the ultimate information users should benefit from national clearinghouse activities through their favorite intermediaries such as state or local general information linkers who would provide them with direct access to documents and other resources. For example, the National Libraries of Medicine and Agriculture have procedures to ensure that users check a local or regional facility for information prior to going to the headquarters. However, if a user mainly wants specialized and/or particularly current information offered by a national clearinghouse, the national clearinghouse should be able to help. Since it is often possible that such an ultimate user may not contact the most appropriate national clearinghouse, each of these clearinghouses should learn about services of related clearinghouses and make appropriate referrals. Many national clearinghouses have mailing lists and routinely communicate with people who have contacted them in the past. However, unless the ultimate user is also a member of a national clearinghouse's priority audience (such as parents for the National Information Center for Handicapped Children and Youth) perhaps the clearinghouse's dissemination activities could be made more cost-effective by putting intermediary linker organizations, rather than the ultimate users, on their information mailing lists unless the ultimate users subscribes to these services for a fee.

References

Applied Management Sciences, Inc., & Cuadra Associates, Inc. 1980. Catalog of human services information resource organizations: An exploratory study of human services information clearinghouses. Project Share, Rockville, MD.

Baker, C., King, S. & Wanger, J. 1981. Human Services Information Clearinghouses: A Discussion of Policy Issues, A Report for the Assistant Secretary for Planning and Evaluation, Department of Health and Human Services, for contract HEW-100-79-0183, Applied Management Sciences, Silver Spring, MD. ED208895.

Brandhorst, T. 1989. What are the possibilities for coordinating education information databases? Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, March 29.

Crandall, D. P. 1989. Implementation Aspects of Dissemination: Reflections Toward an Immodest Proposal. Knowledge: Creation, Diffusion, Utilization, Sage Publications, Fall.

Feaster, T.J. & Others. 1979. Databases and Clearinghouses: Information Resources for Education. Information Series No. 167, National Center for Research in Vocational Education, Columbus, OH. ED 184534.

Gordon, R. & Smink, J., (Compilers). 1982. Databases and Clearinghouses: Information Resources for Education. National Center for Research in Vocational Education, Columbus, OH.

Appendix A: List of Clearinghouses

with year of database formation

Record#	clrhouse	dbyear
17	ACCESS Clearinghouse	1983
22	Abledata	1977
35	Adolescent Pregnancy Prevention Clearinghouse	1985
12	Adult Basic Education Resource Center	1982
9	Am Assoc for Counseling and Devel. Lib & Info Serv	1979
50	American Assoc. for Higher Education Assessment Forum	1985
10	American Society for Training and Development Resource Cent	1986
30	Assoc for Children with Learning Disabilities	1964
11	Assoc for Community Based Education Clearinghouse	1987
75	Center for Human Resources Clearinghouse	1983
29	Center for Special Education Technology	1981
57	Chapter 1 Technical Assistance Center Clearinghouse	1980
64	Clearinghouse for Development and Communication	1974
8	Clearinghouse on Adult Education	1981
51	Clearinghouse on Child Abuse and Neglect Information	1976
65	Clearinghouse on Disability Information	1973
60	Clearinghouse on Infant Feeding and Maternal Nutrition	1980
81	Collaborative Learning Project Resource Center	1987
80	Community Information Exchange	1984
13	Contact Center, Inc	1983
95	ERIC Clearinghouse 4 Science, Mathematics,& Environmental Ed	1966
91	ERIC Clearinghouse for Junior Colleges	1966
96	ERIC Clearinghouse for Social Studies/Social Science Educ.	1966
100	ERIC Clearinghouse on Adult, Career and Vocational Education	1966
85	ERIC Clearinghouse on Counseling and Personnel Services	1966
86	ERIC Clearinghouse on Educational Management	1966
87	ERIC Clearinghouse on Elementary & Early Childhood Education	1966
88	ERIC Clearinghouse on Handicapped & Gifted Children	1966
89	ERIC Clearinghouse on Higher Education	1966
90	ERIC Clearinghouse on Information Resources	1966
92	ERIC Clearinghouse on Languages and Linguistics	1966
93	ERIC Clearinghouse on Reading and Communication Skills	1966
94	ERIC Clearinghouse on Rural Education and Small Schools	1966
97	ERIC Clearinghouse on Teacher Education	1966
98	ERIC Clearinghouse on Tests, Measurement, and Evaluation	1966
99	ERIC Clearinghouse on Urban Education	1966
19	Education Commission of the States Clearinghouse	1973
71	Education Information Branch, Information Services	1986
74	Educational Products Information Exchange	1983
79	Emerging Technology Consultants Information Center	1988
4	English Plus Information Clearinghouse	1987
82	Environmental Protection Agency Public Info Cent and Library	1970
63	Environmental Quality Instructional Resources Center	1976
55	Family Info. Center, Natl Agricultural Library	1986
72	Family Life Information Exchange	1980
76	Family Resource and Referral Center	1979
54	Food and Nutrition Information Center,Natl Agricult Library	1970
25	HEATH Higher Ed & Adult Training 4 People w Handic	1983

14	INET, Intnatl Networks in Ed and Development	1974
47	Immigration Reform and Control Act Clearinghouse	1987
46	Information Center for Special Ed Media and Materials	1986
62	International Clearinghouse 4 Advancementof Science Teaching	1962
21	JAN, Job Accomodations Network	1984
52	Juvenile Justice Clearinghouse	1978
16	KIDSNET	1983
67	Media/Materials Center of Population Communications Services	1982
58	Military Family Information Clearinghouse & Resource Center	1982
20	NARIC,Natl Rehabilitation Information Center	1981
1	NARIS Native American Research Information Service	1979
26	NICHCY, Natl Info Cent 4 Handicapped Childrn&Youth	1981
41	National AIDS Information Clearinghouse, NAIC	1987
77	National Alliance of Business Clearinghouse	1982
66	National Assessment Resource Center	1982
49	National Center for Children in Poverty	1988
44	National Center for Youth with Disabilities Resource Center	1986
56	National Clearinghouse for Alcohol & Drug Information	1972
3	National Clearinghouse for Bilingual Education	1978
43	National Council for Research on Women Information Services	1989
53	National Criminal Justice Reference Service	1972
78	National Dropout Prevention Center Clearinghouse	1986
27	National Early Childhood Technical Assistance Syst Info CH	1988
84	National Gerontology Resource Center	1983
2	National Indian Education Clearinghouse	1989
28	National Info Center on Deafness, NICD	1980
32	National Information Center on Deaf-Blindness	1987
6	National Institute of Corrections Information Center	1980
31	National Resource Center for Experiential Education	1971
61	National Science Resources Center	1987
7	National Vocational Education Clearinghouse	1977
48	Natl CH Community Referenced Tech 4 Non-aversive Behav Mang	1988
24	Natl Clearinghouse for Professions in Special Educ	1987
23	Natl Clearinghouse of Rehab Training Materials	1961
33	Natl Maternal &Child Health CH & Cent Ed 4 Mater & Chld Hlth	1988
73	Population Information Program	1974
18	Project Home Safe National Resource Center	1985
45	Public Service Satellite Consortium Information Services	1982
40	Research Clearinghouse on Women of Color & Southern Women	1982
70	Resources in Computer Education, RICE	1985
5	Rural Clearinghouse for Education and Development	1987
15	SIECUS, Sex Information and Education Council	1964
36	Share Resource Center on Teen Pregnancy Prevention	1976
83	Sociological Abstracts	1953
42	Southern Regional Educational Board Career Ladder Clearingho	1984
59	TASPP,Technical Assistance for Special Populations Program	1989
69	Test Center	1985
39	The Equity Clearinghouse	1987
37	U.S. Agency for International Development	1982
38	Women in Development Resource Center, USAID	1978
34	Women's Bureau Work and Family Clearinghouse	1989
68	Youth Development Information Center	1988